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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,682	07/02/2004	Dolf Henricus Jozef Van Casteren	NL 020007	6574

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EXAMINER	
LE, TUNG X	

ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/500,682	VAN CASTEREN, DOLF HENRICUS JOZEF	
	Examiner	Art Unit	
	Tung X. Le	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/02/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This is a response to the applicant's filing on July 02, 2004. In virtue of this filing, claims 1-11 are currently presented in the instant application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5, in lines 2-3, the recitation of "the frequency of the alternating current provided by the second sub-circuit is made equal to a varying component of the mains voltage rectified by the first sub-circuit" is **unclear** because **the frequency** of the alternating current provided by the second sub-circuit **is made equal to <u>the frequency</u>** of a varying component of the mains voltage rectified by the first sub-circuit **or not ?** Therefore, the correction and/or clarification is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ranganath et al. (U.S. 5,471,117).

Regarding claim 1, Ranganath discloses in figure 3 a circuit for a lamp comprising a first sub-circuit (D1-D4, Lm, Dd, S2, Clf) for connecting to mains voltage (Vin) of a predetermined frequency for rectifying the mains voltage (column 5, lines 43-50); a second sub-circuit (S3-S4) connected to the first sub-circuit for providing an alternating current required for the lamp; and a control circuit (control logic) which is connected to the first (connected at Ds1) and the second sub-circuit (connected at Ds2) and which controls the frequency of the alternating current subject to a varying component of the mains voltage (Vin) rectified by the first sub-circuit (column 2, lines 14-31).

Regarding claim 2, Ranganath discloses in figure 3 that the first sub-circuit comprises a filter (Clf) with one or more coils (L1f-L2f) and a capacitors (Cs), a rectifier circuit (D1-D4), an switch (S1-S2) and a buffer capacitor (Cb) is coupled to its output terminals.

Regarding claim 3, Ranganath discloses in figure 3 that the second sub-circuit comprises a converter circuit (S3-S4) for stabilizing direct current and a switching device for providing a square-wave current of a desired level of for instance +/-0.8 A for mormal operation of the lamp (column 2, lines 14-31).

Regarding claim 4, Ranganath discloses in figure 3 that the control circuit (control logic) is connected on one side to an switch (S2) in the first sub-circuit and on the other side to one or more switches (S3-S4) in the switching device, so that the phase and/or frequency of the lamp current controlled by the switching device is controlled subject to a varying component of for instant 50 Hz or a multiple thereof (column 5, lines 43-50).

Regarding claims 5-6, Ranganath discloses that the frequency and the phase of the alternating current provided by the second sub-circuit is made equal and the same as the phase to a varying component of the mains voltage rectified by the first sub-circuit (column 4, lines 27-31 and column 5, lines 43-50).

Regarding claim 7, Ranganath discloses in figure 4 that the second sub-circuit comprises an igniter (Ld) for generating voltage pulse across the lamp so as to ignite the lamp (column 2, lines 62-65).

Regarding claim 10, Ranganath discloses, in figure 3, a method for operating a lamp comprising the steps of rectifying (D1-D4) a supplied mains voltage (Vin) and bringing it to a desired voltage level; and generating an alternating current (switching S1-S2 by controlled Ds1-Ds2) wherein the frequency of the alternating current is controlled subject to a varying component of the rectified mains voltage (column 5, lines 43-50).

Regarding claim 11, Ranganath discloses that the phase of the alternating current is equal to the phase of the varying component of the rectified mains voltage (column 5, lines 43-50).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranganath et al. (U.S. 5,471,117).

Regarding claims 8-9, Ranganath discloses the claimed invention recited in claim 1 except for a magnitude of 100V –150V and the peak to peak value of a magnitude of 10-100V of the rectified mains voltage. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the same range of the voltage of rectified mains voltage, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Citation of Relevant Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Trestman (U.S. 6,680,585 B2) discloses a method and apparatus for modulating HID ballast operating frequency using DC BUS ripple voltage;

Kamoi et al. (U.S. 6,437,515 B1) discloses a discharge lamp lighting device of high startability with high pulse voltage;

Change (U.S. 6,429,604 B2) discloses a power feedback power factor correction scheme for multiple lamp operation;

Quazi et al. (U.S. 6,359,395) discloses a control circuit for power factor corrected electronic ballast and power supplies;

Bernitz et al. (U.S. 5,680,015) discloses a method to operate a discharge lamp and circuit arrangement for operation of the discharge lamp;

Jayaraman et al. (U.S. 5,650,694) discloses a lamp controller with lamp status detection and safety circuitry; and

Mattas et al. (U.S. 5,410,221) discloses a lamp ballast with frequency modulated lamp frequency.

Inquiry

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X. Le whose telephone number is 571-272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner
Tung Le
AU 2821

TUYET VO
PRIMARY EXAMINER